thing is what it is, not only because it has a place in the universe, and because of its relations to other things, but also because those relations are not the thing. To assert that a thing is its relations involves a second and quite different proposition. A thing indeed presupposes reality and its connections with it, just as our apprehension of a truth presupposes reality. But when we assert that a thing is what it is because of its connections with reality, we do not mean that the thing is its connections. They condition it, but it is separate from them. The other main monistic argument is to the effect that the ultimate Real being one and indivisible, all analysis by means of which we arrive at a world composed of things and relations is a false abstraction of thought, which leads us away from Reality. It is true that a whole, although created by its parts, is more than their sum. A whole, as opposed to an aggregate, is a unity—a new entity which has come into being by their synthesis. But such a whole clearly has parts which it cannot be a fiction to distinguish from one another. The fact that analysis of a whole into parts destroys the whole does not mean that it also destroys the parts, or that the parts are not really its parts, or that they cannot exist as distinguished from one another.

PARIS.

Academy of Sciences, January 2.—M. C. Jordan (later M. A. d'Arsonval) in the chair.—G. **Bigourdan**: The principle of a new zenithal telescope.—Ch. **Depéret** and L. **Gentil**: An upper Miocene marine fauna in the R'arb, western Morocco.—C. **Guichard**: The K networks of general quadrics.—W. **Kilian** and J. **Révil**: The Pleistocene formations and the morphology of the Arc valley, Savoy.—G. **Julia**: The reduction of binary forms with real coefficients of any degree whatever.—G. H. **Hardy** and S. **Ramanujan**: An asymptotic formula for the number of partitions of n.—E. **Belot**: The theory of spiral nebulæ and the true sense of their rotation.—J. **Guillaume**: Observations of the sun made at the Observatory of Lyons during the third quarter of 1916. Observations were possible on eighty-nine days, and the results are given in three tables showing the number of spots, their distribution in latitude, and the distribution of the faculæ in latitude.—C. K. **Reiman**: The absolute density of hydrobromic acid. The gas was prepared by three independent methods, the final purification being by liquefaction and fractional distillation in a vacuum. The mean of thirty-one determinations is 3·6442 grams per litre.—P. **Gaubert**: The indices of refraction of the rhombohedral carbonates. Figures are given for gioberite, siderite, dialogite, smithsonite, dolomite, ankerite, and mesitite. The value of the indices of refraction of various dolomites, ankerites, etc., agrees with that obtained by calculation on applying the laws governing the relations between the indices of an isomorphous mixture and those of its components, but the agreement is only approximate.—V. **Commont**: The Pre-Quaternary Somme-Oise.—E. **Harlé** and J. **Harlé**: The maritime dunes of the coast of Gascony.—A. **Nodon**: Observations of the atmospheric disturbances during the months of October and November, 1916. Confirming earlier researches, there is found to be a close relation between the solar perturbations, electromagnetic disturbances, and disturbances of the terrestrial atmosphere.—Ph. **Flajolet**: Disturbances of the magnetic declination at Lyons (Saint-Genis-Laval) during the third quarter of 1916.—P. de **Beauchamp**: New researches on sexuality in Dinophilus.—L. **Lindet**: Waste in alcoholic fermentation.—F. **Garrigou**: Special examination of urines for the rapid and correct choice of a thermal station.—O. **Laurent**: The realisation of siamoisism in animals. Experiments on grafting together two different animals.—P. Lecomte du **Noüy**: The relative *rôle* of surface and perimeter in the phenomenon of cicatrisation of wounds at the surface and the formula which interprets them.

January 8.—M. A. d'Arsonval in the chair.—The president announced the death of Prof. Chauveau, in his ninetieth year.—M. **Hamy**: The approximate value of a definite integral.—P. **Appell**: An extension of the equations of the theory of vortices and of the equations of Weber.—M. de **Sparre**: Calculation of the hammer in a water-main formed of two sections of different diameters.—M. **Depage**: The secondary transformation of open into closed fractures. A detailed description of a new application of Carrel's method for irrigating fractures.—W. H. **Young**: A new set of conditions for the convergence of Fourier's series.—M. **Petrovitch**: The limit of extensibility of an arc of certain curves. The curves, the deformation of which is examined, are such that on going from one extremity to the other none of the x co-ordinates changes the sense of its variation, each of them increasing or decreasing along the arc.—M. **Souslin**: A definition of measurable B ensembles without transfinite numbers.—N. **Lusin**: The classification of M. Baire. Some consequences of the results of M. Souslin in the preceding paper.—L. **Hartmann**: The systematic variation of the value of the kinetic energy in the elastic rebound of bodies. According to experiment, in the elastic shock of bodies the sum $m\mathrm{V}^2+m'\mathrm{V}'^2$ is not constant and independent of V and V′, contrary to the proposition of Leibnitz.—J. **Olive**: The mechanical trace of the ballistic hodograph.—E. **Esclangon**: The reflection and refraction of isolated waves at the surface of separation of two fluids in repose or in motion.—A. **Pereira-Forjaz**: Spectrographic studies of Portuguese minerals of uranium and zirconium. Results are given for chalcolites from Sabugal and Nellas, autunite from Nellas, and zircon from Alter Pedroso. Radium was present in the chalcolites.—P. **Fallot**: The geology of the island of Ibiza.—F. **Grandjean**: The orientation of anisotropic liquids on the cleavages of the crystals. An account of the examination of anisaldazine, p-azoxyanisol, and p-azoxyanisolphenetol. It is concluded that the property of orientation of an anisotropic liquid on a determined cleavage is not a reticular property.—J. **Deprat**: The geological exploration of the part of Yun-nan comprised between the Tonkin frontier, the Kwang-si, and the Kwei-tcheou.—Ph. **Glangeaud**: The substratum of the volcanic massif of Mont Dore.—E. **Belot**: Provisional trace of the curve described by the magnetic north pole since 1541.—Mlle. Y. **Dehorne**: A new Stromatopore from the Lusitanian of Cezimbra (Portugal).—P. **Lesage**: The germination of the seeds of *Lepidium sativum* in solutions of electrolytes.—C. **Galaine** and C. **Houlbert**: A new arrangement for the rapid filtration of potable waters after their purification by the Lambert-Laurent process. After treatment with potassium permanganate, the removal of the precipitated oxide of manganese presents practical difficulties. It is proposed to modify the apparatus so that the purification and filtration take place in the same vessel, without transference and possible re-contamination.—F. **Dienert** and G. **Mathieu**: Search for typhoid and paratyphoid bacilli.

BOOKS RECEIVED.

Recherches sur les Mouvements Propres des Etoiles dans la Zone Photographique de Helsingfors. By R. Furuhjelm. Pp. 190. (Helsingfors: Société de Littérature Finnoise.)

Compressed Air Practice in Mining. By D. Penman. Pp. vii+221. (London: C. Griffin and Co., Ltd.) 5*s*. net.

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A Handbook of Briquetting. By Prof. G. Franke. Translated by F. C. A. H. Lantsberry. Vol. i. Pp. xxviii+631. (London: C. Griffin and Co., Ltd.) 30*s.* net.

Diderot's Early Philosophical Works. Translated and edited by M. Jourdain. Pp. v+246. (Chicago and London: The Open Court Publishing Co.) 4*s.* 6*d.* net.

The Geometrical Lectures of Isaac Barrow. Translated, with Notes and Proofs, by J. M. Child. Pp. xiv+218. (Chicago and London: The Open Court Publishing Co.) 4*s.* 6*d.* net.

New Essays concerning Human Understanding. By G. W. Leibniz. Together with an Appendix consisting of some of his Shorter Pieces. Translated by A. G. Langley. Second edition. Pp. xix+861. (Chicago and London: The Open Court Publishing Co.) 12*s.* net.

Contributions from the Jefferson Physical Laboratory and from the Cruft High-Tension Electrical Laboratory of Harvard University for the Year 1915. Vol. xii. (Cambridge, Mass.)

Chemical Discovery and Invention in the Twentieth Century. By Sir W. A. Tilden. Pp. xvi+487. (London: G. Routledge and Sons, Ltd.) 7*s.* 6*d.* net.

Le Traitement des Plaies Infectées. By A. Carrel and G. Dehelly. Pp. 177. (Paris: Masson et Cie.) 4 francs.

Les Dysenteries, le Cholera Asiatique, le Typhus exanthématique. By H. Vincent and L. Muratet. Pp. 184. (Paris: Masson et Cie.) 4 francs.

Registration of Business Names. By H. W. Jordan. Pp. 32. (London: Jordan and Sons, Ltd.) 6*d.* net.

Elementary Dynamics of the Particle and Rigid Body. By Prof R. J. Barnard. Pp. vii+374. (London: Macmillan and Co., Ltd.) 6*s.*

DIARY OF SOCIETIES.

THURSDAY, February 1.

Royal Society, at 4.30.—An Application of the Theory of Probabilities to the Study of *a priori* Pathometry. Part II.: Sir Ronald Ross and Miss H. P. Hudson.—An Investigation into the Periodicity of Measles Epidemics in London from 1703 to the present day by the Method of the Periodogram: Dr. J. Brownlee.—The Causes responsible for the Developmental Progress of the Mammary Glands in the Rabbit during the Latter Part of Pregnancy: Capt. J. Hammond.—The Post-œstrous Changes occurring in the Generative Organs and Mammary Glands of the Non-pregnant Dog: F. H. A. Marshall and E. T. Halnan.

Royal Institution, at 3.—The Mechanism of Chemical Change: Prof. F. G. Donnan.

Chemical Society, at 8.—Chromium Phosphate: A. F. Joseph and W. N. Rae.—The Detection of Traces of Mercury Salts in Toxicological Work: K. C. Browning.—"Stepped" Ignition: R. V. Wheeler.—The Catalytic Bleaching of Oils, Fats, and Waxes: H. Rai.—Alkaloidal Derivatives of Mercuric Nitrite: P. C. Rây.—Synthesis of a Derivative of the Lowermost Homologue of Thiophene: P. C. Rây and M. L. Dey.—The Detergent Action of Soap: S. U. Pickering.—The Occlusion of Iron by the Phospho-molybdate Precipitate: E. H. Archibald and H. B. Keegan.

Mathematical Society, at 5.30.

Linnean Society, at 5.—Some Plants that might occur in Britain: C. E. Salmon.—Recent Exploration of the Abrolhos Islands: Prof. W. A. Herdman.—*Mentha exigua*, Mill: J. Britten.—The Structure of the Leaves of Hybrid Orchids: J. Charlesworth and J. Ramsbottom.

FRIDAY, February 2.

Royal Institution, at 5.30.—Recent Physiology and the War: Prof. C. S. Sherrington.

SATURDAY, February 3.

Geologists' Association, at 3.—President's address: The Study of the Archæan Rocks, with Special Reference to Scotland: G. Barrow.

MONDAY, February 5.

Royal Society of Arts, at 4.30.—Town Planning and Civic Architecture: Prof. A. Beresford Pite.

Aristotelian Society, at 8.—Valuation and Existence: F. C. Bartlett.

Victoria Institute, at 4.30.—Islam and Animism: Rev. Dr. S. M. Zwemer.

Royal Geographical Society, at 5.30.—Thirty Years' Work of the Royal Geographical Society: Dr. J. Scott Keltie.

TUESDAY, February 6.

Royal Institution, at 3.—The Old Brain and the New Brain, and their Meaning: Prof. C. S. Sherrington.

Zoological Society, at 5.30.—Structure and Functions of the Mouth-parts of the Palæmonid Prawns: L. A. Borradaile.—Scolex in the Cestode Genus Duthiersia, and on the Species of that Genus: Dr. F. E. Beddard.—Report on the Deaths which occurred in the Zoological Gardens during 1916: Prof. H. G. Plimmer.

Röntgen Society, at 8.15.—Some Properties and Applications of Selenium: Dr. E. E. Fournier d'Albe.

Institution of Civil Engineers, at 5.30.—The Main Drainage System of London: G. W. Humphreys.

WEDNESDAY, February 7.

Royal Society of Arts, at 4.30.—The Future of British Spas: Dr. R. F. Fox.

Geological Society, at 5.30.

Entomological Society, at 8.

Society of Public Analysts, at 8.—The Quantitative Estimation of Mercury in Organic Compounds: J. E. Marsh and O. G. Lye.—The Shrewsbury and Knapp Process for the Detection of Coconut Oil: G. D. Elsdon.—The Detection of Rose Petals in Blue Pill: W. Partridge.

THURSDAY, February 8.

Royal Society, at 4.30.—*Probable Papers*: The Dynamics of Revolving Fluid: Lord Rayleigh.—Deflection of the Vertical by Tidal Loading of the Earth's Surface: Prof. H. Lamb.—Spontaneous Generation of Heat in Recently Hardened Steel: C. F. Brush and Sir R. Hadfield.

Royal Institution, at 3.—The Mechanism of Chemical Change: Prof. F. G. Donnan.

Institution of Electrical Engineers, at 8.—Frequency Changers: R. Townend.

Optical Society, at 7.30—Annual Meeting.—More Notes on Glass Grinding and Polishing: J. W. French.

FRIDAY, February 9.

Royal Institution, at 5.30.—Experimental Phonetics and its Utility to the Linguist: D. Jones.

Royal Astronomical Society, at 5.—Anniversary Meeting.

Malacological Society, at 7.—Annual Meeting. Presidential Address: Systematic List of the Marginellidæ: J. R. le B. Tomlin.

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Editorial and Publishing Offices:
MACMILLAN & CO., Ltd.,
ST. MARTIN'S STREET, LONDON, W.C.

Advertisements and business letters to be addressed to the Publishers.

Editorial Communications to the Editor.
Telegraphic Address: Phusis, London.
Telephone Number: Gerrard 8830.

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